



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,284	08/20/2003	Brindesh Dhruva	60.1489	5793
37003	7590	05/16/2006	EXAMINER	
SCHLUMBERGER-DOLL RESEARCH 36 OLD QUARRY ROAD RIDGEFIELD, CT 06877-4108			WEST, PAUL M	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/644,284

Applicant(s)

DHRUVA ET AL.

Examiner

Paul M. West

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,9-12,16,17 and 21 is/are rejected.
- 7) ☒ Claim(s) 3-8,13-15,18-20,22 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,12,16,17 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Proett et al. (5644076), hereinafter Proett ('076).

3. Regarding claim 1, Proett ('076) teaches a method for determining formation fluid pressure, comprising: providing a tool 200 defining a probe 212 and a variable-volume pretest cavity 220 fluid-coupled to the probe 212; pressing the probe into contact with a mud cake 206 (Col. 6, lines 38-40); expanding the volume of the cavity in sufficient amount to produce a break in the mud cake seal during a draw-down period (Col. 7, lines 26-36); detecting an occurrence of a break in the mud cake seal (307 in Fig. 3, 508 in Fig. 5); holding constant the volume of the cavity immediately after the occurrence of the break in the mud cake seal (Col. 7, line 37), for a sufficient build-up period to establish pressure equilibrium between cavity fluid and formation fluid (Col. 7, lines 44-52); measuring pressure in the cavity (Col. 7, lines 52-53); and setting formation fluid pressure equal to measured pressure (Col. 3, lines 26-29).

4. Regarding claim 2, Proett ('076) teaches detecting an occurrence of a break in the mud cake seal including measuring cavity pressure and detecting an abrupt change (307 or 508) associated with cavity pressure (Col. 7, lines 33-36).
5. Regarding claim 12, Proett ('076) teaches a tool for determining formation fluid pressure, comprising: an elongated body 200 adapted for downhole operation; a probe 212 extendable from the elongated body, the probe defining an inflow aperture; a pretest piston pump 218 defining a variable-volume pretest cavity 220 coupled to the inflow aperture (Fig. 2B); control means including a means for expanding the volume of the pretest cavity in sufficient amount to produce a break in a mud cake seal (Col. 7, lines 35-36), means 216 for detecting a break in the mud cake seal, and means for holding constant the volume of the cavity immediately after detecting a break in the mud cake seal, for a sufficient build-up period to establish pressure equilibrium between the pretest cavity fluid and formation fluid (Col. 7, line 37 and 52-53); and a pressure sensor 216 coupled to measure pressure in the pretest cavity.
6. Regarding claim 16, Proett ('076) teaches the tool including a constant-volume flow line 219.
7. Regarding claim 17, the flow line 219 includes a dedicated probe 212.
8. Regarding claim 21, Proett ('076) teaches the tool comprising a sample line 215 coupled to the cavity 220, and an isolation valve 214 located between the sample line and the cavity.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proett ('076) in view of Desbrandes.

11. Regarding claims 9-10, Proett teaches all of the limitations as set forth above but does not mention that the pretest cavity is expanded at a predetermined constant rate. Desbrande, in the article "Wireline Formation Testing: A New Extended Drawdown Technique" teaches expanding a pretest cavity in a formation pressure testing tool at a constant rate that falls within the range of 3-160 cc/minute (page 42, lines 1-3). It would have been obvious to one of ordinary skill in the art to combine the teachings of Desbrandes with the method of Proett because, as Desbrandes points out, the volume expansion must be constant to interpret the pressure measurements with accuracy.

12. Regarding claim 11, the combination of Proett and Desbrandes does not specifically teach using a volume expansion rate of 5 cc/minute, however Desbrandes does teach expanding at 3.6 cc/minute (page 42, line 1) and that the expansion rate is based on the capacity of the flowlines and what type of fluid is in them. It would have been obvious to one of ordinary skill in the art to use any of a large range of expansion rates, including 5 cc/minute, depending on the capacity of the flow lines and the particular fluid being used.

***Allowable Subject Matter***


13. Claims 3-8, 13-15, 18-20, 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul M. West whose telephone number is (571) 272-8590. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800